UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,166	06/26/2001	Stephen A. Roth	18360/214077	2378

38934 7590 11/03/2005		EXAMINER
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ART UNIT	PAPER NUMBER
2665	

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DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/892,166	ROTH ET AL.
	Examiner	Art Unit	
	Cynthia L. Davis	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, filed 8/11/2005, with respect to the rejection(s)of claim(s)

1-17 over the Lu reference have been fully considered and are persuasive. Therefore,

the rejection has been withdrawn. However, upon further consideration, a new

ground(s) of rejection is made in view of the Abe reference.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-2, 4-6, 11, 14-15, and 17 are rejected under 35 U.S.C. 102(b) as being

anticipated by Abe.

Regarding claim 1, receiving a self-generated broadcast signal; determining a

median value of the self-generated broadcast signal; and adjusting the bit detection

threshold based on the median value is disclosed in Abe, column 36, lines 25-35

(disclosing adjusting the bit detection threshold of a received signal based on the

frequency deviation, which is the same as the median value, see claim 4).

Regarding claim 2, digitizing the received self-generated broadcast signal prior to

determining the median value of the self-generated broadcast signal is disclosed in Abe,

figure 7, element 501 (showing an A/D converter), column 16, lines 33-36, and column

36, lines 25-35 (the signal being adjusted is a digital signal).

Regarding claim 4, determining a median value of the self-detecting a positive

peak frequency value and a negative frequency peak value for the self-generated

broadcast signal; and determining a peak-to-peak deviation of the self-generated

broadcast signal is disclosed in Abe, column 36, lines 25-35 (disclosing calculating the

frequency deviation of the signal).

Regarding claim 5, filtering the peak-to-peak deviation to substantially reduce

short-term jitter and define the bit detection threshold value is missing from Abe.

However, Holloway discloses in column 9, lines 64-65, using a filter to reduce short-

term jitter. It would have been obvious to one skilled in the art at the time of the

invention to use a filter in the system of Abe. The motivation would be to reduce the

short-term jitter of the threshold value.

Regarding claim 6, detecting a positive peak value and a negative frequency

peak value for a self-generated broadcast signal further comprises detecting a positive

peak value and a negative frequency peak value substantially concurrent with the self-

generated broadcast signal being transmitted is disclosed in Abe, column 36, lines 25-

35 (in order to calculate the frequency deviation, the positive and negative peaks must

be detected).

Regarding claim 11, an analog-to-digital (A/D) converter that digitizes an analog

baseband input signal by sampling the signal at a predefined date rate is disclosed in

Abe, figure 7, element 501 (showing an A/D converter), and column 16, lines 33-36. A

positive peak detector in electrical communication with the A/D converter that receives

the signal from the AJD converter and determines a positive peak value; a negative

frequency peak detector in electrical.communication with the A/D converter that

receives the signal from the A/D converter and determines a negative frequency peak

value; a calculation task unit in data communication with the negative and positive peak

detectors that calculates a peak-to-peak deviation to formulate a bit detection threshold

value; and a bit detector in data communication with the calculation task unit and in

electrical communication with the A/D converter that receives the digitized signal from

the A/D converter and the bit detection threshold value from the calculation task unit for

the purpose of converting the digitized signal to a digitized bit stream of data is

disclosed in Abe, column 36, lines 25-35 (disclosing adjusting the bit detection threshold

of a received signal based on the frequency deviation, which is the same as the median

value, see claim 4; in order to calculate the frequency deviation, the peaks must be

calculated).

Regarding claim 14, determining a median value of the self-generated broadcast

signal comprises determining a median value between positive and negative peaks of

the self-generated broadcast signal is disclosed in Abe, column 36, lines 25-35

(disclosing calculating the frequency deviation of the signal, which is the same as

calculating the median).

Regarding claim 15, the median value is a true median rather than a weighed

average is disclosed in Abe, column 36, lines 25-35 (disclosing calculating the

frequency deviation of the signal, which is the same as calculating the median).

Regarding claim 17, the bit detection threshold is formulated based at least in

part on a true median rather than a weighed average is disclosed in Abe, column 36,

lines 25-35 (disclosing calculating the frequency deviation of the signal, which is the

same as calculating the median).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

3.   Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Abe in view of Ueunten.

Regarding claim 7, the step of receiving a self-generated broadcast signal further

comprises receiving a self-generated broadcast signal through an intermediate level

frequency feedback path is missing from Abe. However, Ueunten discloses in column 5,

lines 21-23 using a frequency feedback path to help maintain a desired output voltage

in the face of externally applied signals. It would have been obvious to one skilled in the

art to use a frequency feedback path. The motivation would be to reduce the effects of

external noise on the signal.

Regarding claim 8, the step of receiving a self-generated broadcast signal further

comprises receiving a self-generated broadcast signal through a transmit signal level

frequency feedback path is missing from Abe. However, Ueunten discloses in column

5, lines 21-23 using a frequency feedback path to help maintain a desired output

voltage in the face of externally applied signals. It would have been obvious to one

skilled in the art at the time of the invention to use a frequency feedback path. The

motivation would be to reduce the effects of external noise on the signal.

4.   Claims 3, 9, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Abe in view of Schrader.

Regarding claim 3, the step of receiving a self-generated broadcast signal further

comprises receiving an ownship broadcast signal and wherein the step of determining a

median value of the self-generated broadcast signal further comprises determining a

median value of the ownship broadcast signal is missing from Abe. However, Schrader

discloses in column 6, lines 15-16, an ownship signal. It would have been obvious to

one skilled in the art at the time of the invention to use the system of Abe with the signal

of Schrader. The motivation would be to manipulate a type of signal commonly used in

aircraft, which are a common mode of transit (see the abstract of Schrader).

Regarding claim 9, receiving an analog broadcast signal; digitizing the analog

broadcast signal at a predetermined data rate is disclosed in Abe, figure 7, element 501

(showing an A/D converter), and column 16, lines 33-36. Detecting a positive peak

value and a negative frequency peak value from the digitized signal; calculating a peak-

to-peak deviation for the digitized signal based on the positive and negative frequency

peak values, and adjusting the bit detection threshold based on the peak-to-peak

deviation is disclosed in Abe, column 36, lines 25-35 (disclosing adjusting the bit

detection threshold of a received signal based on the frequency deviation, which is the

same as the median value, see claim 4). That the signal is an ownship signal is missing

from Abe. However, Schrader discloses in column 6, lines 15-16, an ownship signal. It

would have been obvious to one skilled in the art at the time of the invention to use the

system of Abe with the signal of Schrader. The motivation would be to manipulate a

type of signal commonly used in aircraft, which are a common mode of transit (see the abstract of Schrader).

Regarding claim 16, the bit detection threshold is adjusted based at least in part on a true median rather than a weighed average is disclosed in Abe, column 36, lines 25-35 (disclosing calculating the frequency deviation of the signal, which is the same as calculating the median).

5.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Schrader in further view of Holloway.

Regarding claim 10, filtering the calculated peak- to-peak deviation to reduce short-term jitter is missing from Abe. However, Holloway discloses in column 9, lines 64-65, using a filter to reduce short-term jitter. It would have been obvious to one skilled in the art at the time of the invention to use a filter in the system of Abe. The motivation would be to reduce the short-term jitter of the threshold value.

6.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in view of Schrader in further view of McGibney.

Regarding claim 12, the positive peak detector and the negative frequency peak detector are activated to detect frequency peaks when the TDMA communication device begins sending a signal and are deactivated when the TDMA communication device completes sending the signal is missing from Abe. However, McGibney discloses in column 10, lines 14-24, a peak detector in a TDMA system that is enabled during the TDMA frame, and then disabled. It would have been obvious to one skilled in the art to enable the peak detectors only when the system is transmitting. The motivation would

be to only have the peak detectors on when they are needed, thereby saving power
resources.

7.   Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abe in
view of Holloway.

Regarding claim 13, a filter in data communication with the calculation task unit
that filters the peak-to-peak deviation value to reduce short-term jitter is missing from
Abe. However, Holloway discloses in column 9, lines 64-65, using a filter to reduce
short-term jitter. It would have been obvious to one skilled in the art at the time of the
invention to use a filter in the system of Abe. The motivation would be to reduce the
short-term jitter of the threshold value.

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Cynthia L. Davis whose telephone number is (571) 272-
3117. The examiner can normally be reached on 8:30 to 6, Monday to Thursday.
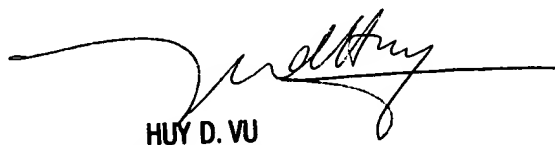
If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the
organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

CLD
10/20/2005

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